USGS

WATER RESOURCES RESEARCH GRANT PROPOSAL

Project ID: 2005VI50B

Title: Water Usage for Papaya Production During Drought in the U.S. Virgin Islands

Project Type: Research

Focus Categories: Agriculture, Drought, Water Use

Keywords: papaya, drip irrigation, mulch

Start Date: 03/01/2005

End Date: 02/28/2006

Federal Funds: $15,000

Non-Federal Matching Funds: $0

Congressional District: VI

Principal Investigator:
Thomas W. Zimmerman

Abstract

Papayas, are a highly favored fruit of tropical regions. It is used when green as a vegetable and, when ripe, as a delicious fruit. The tourism and hotel industries have a high demand for tropical fruits to offer their guests to make their stay memorable. When papayas are seen in the U.S. Virgin Islands marketplace, they are most often the result of costly imports. There is a great potential to satisfy the need for papayas by local farmers. The semiarid environment and cost of potable water limits papaya production by the island population of small scale African-American and Hispanic farmers. The U.S. Virgin Islands has a distinct dry season when supplemental water is required. The objectives of this research are to study the water requirements of papaya during the dry season and incorporating drip irrigation and mulch for growing selected papaya varieties at multiple spacing regimes. Specifically (i) to integrate water conservation through drip irrigation and mulching into papaya production; (ii) to determine water use efficiency of papaya from multiple plant spacing regimes; and to (iii) demonstrate to small scale farmers the benefits of drip irrigation and biodegradable mulch in water conservation with agricultural production.